

Connecticut Avenue Bridge
Spanning Kingle Valley
Washington
District of Columbia

HAER No. DC-27

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PHOTOGRAPHS
WRITTEN HISTORICAL AND DESCRIPTIVE DATA

Historic American Engineering Record
National Park Service
U.S. Department of the Interior
Washington, DC 20013-7127

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HISTORIC AMERICAN ENGINEERING RECORD
CONNECTICUT AVENUE OVER KLINGLE VALLEY BRIDGE
HAER No. DC-27

Location: Connecticut Avenue over Klingle Valley Bridge spans the Klingle Valley, a western arm of Rock Creek Park, in northwest Washington, D.C.

Date of Construction: 1930-32.

Designer and Builder: Paul Cret, architect; Modjeski, Masters & Chase, engineers; W. P. Thurston Company of Richmond, Virginia, contractors.

Present Owner: Department of Public Works, District of Columbia.

Present Use: Vehicular and pedestrian bridge.

Significance: This single-arch, steel span was designed by the same eminent designers as the Calvert Street Bridge (HAER No. DC-23), which post-dates it by a few years. Of a different material than other Rock Creek Valley spans, this Connecticut Avenue Bridge represents an alternative solution to the problem of designing a bridge for a park setting. Its steel arch was intended to be less obstructive to the landscape than the more massive bridges over Rock Creek that followed the general pattern of masonry-arch design set the Connecticut Avenue Bridge (1897-1907, HAER No. DC-6).

Project Information: The documentation of Rock Creek and Potomac Parkway was undertaken as a two-year pilot project to help establish standards and guidelines for recording the structures and landscape features of park roads and parkways. This project was a joint effort of the Historic American Buildings Survey and the Historic American Engineering Record (HABS/HAER), a combined division of the National Park Service, Robert Kapsch, chief. The project was sponsored by the Park Roads Program of the National Park Service, John Gingles, deputy chief, Safety Services Division. The project supervisor was Sara Amy Leach, HABS historian.

The Washington-based summer 1992 documentation team was headed by landscape architect Robert Harvey (Iowa State University-Department of Landscape Architecture) who served as field supervisor; the landscape architects were Deborah Warshaw (University of Virginia) and Dorota Pape-Siliwonzuk (US/ICOMOS-Poland, Board of Historical Palaces and Gardens Restoration); the architects were Evan Miller (University of Colorado-Boulder), Steven Nose (University of Maryland), and Tony Arcaro (Catholic University). The historians were Tim Davis (University of Texas) and Amy Ross (University of Virginia). Jack E. Boucher made the large-format photographs; Air Survey Corporation of Sterling, Virginia, produced the aerial photography and digital mapping from which the site-plan delineations were made.

History of the Crossing

The first bridge at this location dates from 1891 when Connecticut Avenue was extended beyond Klinge Valley. It was built by the Edgemore Bridge Company for the Rock Creek Railway Company, which erected the old Calvert Street Bridge the same year. Both bridges were part of the company's sponsorship of real estate development in Chevy Chase. Soon thereafter, the company transferred ownership of both bridges to the commissioners of the District of Columbia.

The original Connecticut Avenue Bridge over Klinge Valley was a steel truss supported on stone abutments. Tracks down the center were flanked by roadways. Its dimensions were: 497' long, 35' wide, and 50' high, with a load limit of 6 tons. Like the original Calvert Street Bridge, it cost about \$35,000.¹

History of the Design

The design process for the Connecticut Avenue Bridge over Klinge Valley was a fairly smooth affair that progressed from presentation of the project to the construction phase in less than eight months. On October 16, 1930, Ralph Modjeski (1861-1940) of Modjeski, Masters & Chase, presented his design for a new bridge at a meeting of the Commission of Fine Arts (CFA). The scheme had been prepared with the assistance of architect Paul Cret (1876-1945). At the time, Rock Creek Valley bridges were measured against the example of the Connecticut Avenue Bridge (1897-1907).² Though there were no definitive standards for type or material, each new structure was expected to be a worthy specimen of the type of bridge determined to be best suited to its particular location and setting.³ This steel-arch bridge had already been approved by the District Commissioners and the National Capital Park and Planning Commission.

Maj. John C. Gotwals of the District Commissioners sent the CFA preliminary plans for construction shortly after this meeting. In December, CFA Chairman Charles Moore responded to Gotwals that the commission had approved the design in general, but recommended lightening the deck level by using balusters instead of an unbroken parapet. Moore also said the torus coping should be greatly reduced, and that the lanterns on the ends of the bridge should be restudied with their bases strengthened. However, no suggestions were made to change its overall form--as these were just questions of detailing.⁴

A few years after Modjeski, Masters & Chase and Cret teamed up on this design, they collaborated again on the new Calvert Street Bridge (1935). Though they proposed a steel arch for this location also, a masonry-arch design was ultimately adopted.

Construction History

In May 1931, the District Commissioners awarded the contract for this bridge to W. P. Thurston Company of Richmond. The winning bid was nearly \$460,000, the lowest of nine submitted. Work started immediately.

¹ Zack Spratt, "Rock Creek's Bridges," Records of the Columbia Historical Society 53-56 (1959): 116.

² Minutes of the Commission of Fine Arts, 16 October 1930. RG66.

³ Frank B. Scheetz, "Chapter VI: Bridges," Planning and Building the City of Washington, ed. by Frederick Haynes Newell (Washington, D.C.: Ransdell Inc., 1932), 127.

⁴ Charles Moore, to Maj. John C. Gotwals, Engineer Commissioner of the District of Columbia, 6 December 1930. RG66.

A temporary roadway and portions of the old bridge accommodated traffic during construction. The expanse was built in three latitudinal sections, which allowed the artery to be kept open throughout. While work was in progress on each third of the bridge, traffic was restricted to the other two-thirds. Speed and weight of traffic were also restricted during this construction. The abutments of the old bridge were left in place and used as supports for the new abutments.

District highway department engineers Capt. Herbert C. Whitehurst and C. R. White directed construction for the District Commissioners. A. B. Green was employed as resident engineer. The new bridge was finished on January 27, 1932.⁵

Design and Description

A simple steel-arch was selected in consideration of the CFA's recommendation for a bridge design that would intrude minimally the wooded valley. Its stone abutments were intended to lessen the impact of the steel on the landscape.⁶ The two-hinge steel arches have open spandrels, and each span is composed of four such steel ribs.

The bridge has a center span of 250', and a 123' abutment at each end for a total length of 496'. It was designed to carry a load of 20 tons, much greater than the 6-ton capacity of the 1891 bridge.⁷ The bridge is 50' high; has a 60' roadway, with 10' sidewalks. The road width was designed to be easily expanded to 80' by incorporating the sidewalks into the roadway, and then tacking on new sidewalks. The deck has not been expanded, however, and it remains at 80' wide. The deck is reinforced concrete with an asphalt surface.⁸

Eight stone urns topped by bronze-fitted lamps--these somewhat resembling miniature lighthouses--adorn the endposts of the bridge.⁹ The approaches to the bridge offer wider sidewalks and concrete benches. The metal balustrade has Art Deco detailing.

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Summer 1992

⁵ "New Klinge Bridge Finished Today," Evening Star, 27 January 1932.

⁶ Donald Beekman Myer, Bridges and the City of Washington (Washington, D.C.: U.S. Commission of Fine Arts, 1974; reprint, 1983), 74.

⁷ Department of Highways, Washington, D.C., A Pictorial Report on Highway Bridges and Structures in the District of Columbia (Washington, D.C.: Department of Highways, 1948), 47.

⁸ Proctor, n.p.

⁹ Department of Highways, 47.

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ADDENDUM TO:
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